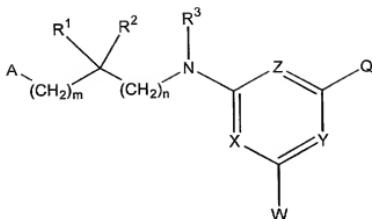


CLAIMS

1. A compound of formula

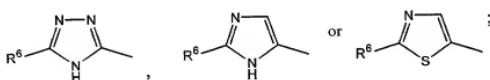
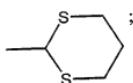


wherein:

(a) all of X, Y and Z are CH; or (b) one of X, Y and Z is N and the rest of X, Y

5 and Z are CH; or (c) two of X, Y and Z are N and the other of X, Y and Z is CH; or

(d) all of X, Y and Z are N;

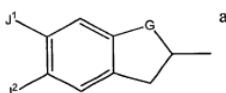
A is A¹ or A²;A¹ is R⁴R⁵N-C(O)-10 A² is chosen from R⁷C(O)NH-, R⁷S(O)₂NH-, R⁴NH-, and R⁴O-;Q is chosen from heteroaryl, aryl, -CH₂R¹³, -CH=N-OCH₃ andW is chosen from H, Cl, F, R⁸, C₁-C₄-alkylaryl, -OR⁸, -SR⁸, -NR⁹R¹⁰ and -NHC(O)R¹¹, with the proviso that when two of X, Y and Z are15 N and Q is imidazolyl, W may not be H, Cl, F or R⁸;R¹ is chosen from alkyl, cycloalkyl, alkenyl, C₁-C₃-alkylcycloalkyl, heterocycl, C₁-C₃-alkylheterocycl, aryl, C₁-C₃-alkylaryl, heteroaryl, C₁-C₃-alkylheteroaryl, (C₁-C₃-alkyloxy)alkyl, (C₁-C₃-

alkyloxy)cycloalkyl, (C₁-C₃-alkylthio)alkyl, (C₁-C₃-alkylthio)cycloalkyl and (C₁-C₃-alkylsulfonyl)alkyl;

20 R² is H or C₁-C₃-alkyl, or R¹ and R² taken together form a 5- to 7-membered ring structure optionally containing O, S or NR¹²;

25 R³ is H or C₁-C₆-alkyl, or, when n is zero, R² and R³ taken together may form a 6-membered ring, which may be fused to a six-membered saturated or aromatic carbocycle;

25 R⁴ is chosen from H, aryl, heteroaryl, C₁-C₄-alkyl substituted with from one to three aryl or heteroaryl residues,

30 and  , wherein J¹ and J² are independently chosen from H, F, Cl, CN, NO₂ and CH₃, and G is chosen from -CH₂-, -CH₂CH₂-, -CH₂CH₂CH₂-, -OCH₂-, -CH₂O-, -CH₂CH₂O-, -OCH₂CH₂-, -O-, -N(lower alkyl)-, -N(lower alkyl)CH₂-, -CH₂N(lower alkyl)-, -S-, -SO-, -SO₂-, -CH₂S-, -SCH₂-, -CH₂SO-, -SOCH₂-, -CH₂SO₂-, and -SO₂CH₂-,

35 R⁵ is H or C₁-C₃-alkyl, with the proviso that both R³ and R⁵ cannot be alkyl;

35 R⁶ is aryl;

35 R⁷ is aryl or C₁-C₃-alkylaryl;

35 R⁸ is chosen from alkyl, aryl, heteroaryl, substituted alkyl, C₁-C₄-alkylaryl, C₁-C₄-alkylheterocycl and C₁-C₄-alkylheteroaryl;

40 R⁹ is chosen from H, alkyl, alkenyl, substituted alkyl, cycloalkyl, aryl, alkoxy, heteroaryl, fluoroalkyl, C₁-C₄-alkyleycloalkyl, (C₁-C₄-alkoxy)alkyl, (C₁-C₄-alkoxycarbonyl)alkyl, (C₁-C₄-alkylthio)alkyl,

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heterocyclyl, C₁-C₄-alkylheterocyclyl, C₁-C₄-alkylaryl, and C₁-C₄-alkylheteroaryl;

45 R¹⁰ is H or C₁-C₃-alkyl, or
R⁹ and R¹⁰ taken together may form a 5- to 7-membered ring structure optionally containing O, S, SO, SO₂ or NR¹², said ring optionally substituted with -OH, -CN, -COOH or -COOCH₃;

R¹¹ is aryl;

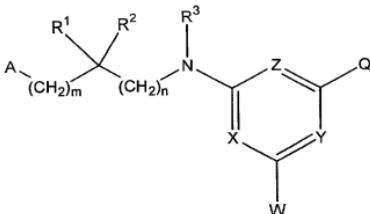
50 R¹² is chosen from H, C₁-C₃-alkyl, alkoxy carbonyl, methoxyacetyl and aryl;

R¹³ is chosen from -OH, -OTHP, 1-imidazolyl, and 1-pyrrolyl;

m is zero or one; and

n is zero or one, with the proviso that when A is A², m and n cannot both be zero.

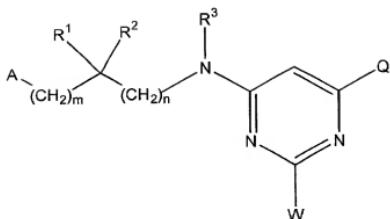
2. A pyrimidine according to claim 1 of formula



wherein:

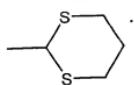
two of X, Y and Z are N and the third is CH.

3. A 4-pyrimidinamine according to claim 2, wherein Z is CH, having the formula



4. A 4-pyrimidinamine according to claim 3 wherein Q is chosen from imidazolyl, methylimidazolyl, pyrrolyl, methylpyrrolyl, pyrazolyl, methylpyrazolyl, hydroxymethylimidazolyl, (dimethylaminomethyl)imidazolyl, furanyl, methylfuranyl, thienyl, oxazolyl, thiazolyl, pyridinyl, quinolinyl, 1-

5 methylpyrimidin-2-onyl, phenyl, fluorophenyl, hydroxymethyl, tetrahydropyranyloxymethyl, imidazolylmethyl, pyrrolylmethyl, $-\text{CH}=\text{N}-\text{OCH}_3$ and

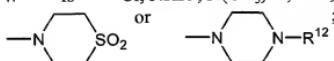


5. A 4-pyrimidinamine according to claim 4 wherein:

Q is chosen from pyrrol-1-yl, imidazol-1-yl, furan-3-yl, 2-methylimidazol-1-yl and 4-methylimidazol-1-yl;

A is $\text{R}^4\text{R}^5\text{N}-\text{C}(\text{O})-$;

W is Cl , NHR^9 , $\text{N}(\text{CH}_3)\text{R}^9$, OR^8 , SR^8 , R^8 , morpholin-4-yl,



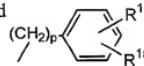
R¹ is chosen from alkyl, cycloalkyl, $\text{C}_1\text{-C}_3$ -alkylaryl, $\text{C}_1\text{-C}_3$ -

15 alkylcycloalkyl, $\text{C}_1\text{-C}_3$ -alkylheterocyclyl, $\text{C}_1\text{-C}_3$ -alkylheteroaryl;

R^2 , R^3 and R^5 are H;

R^8 is $\text{C}_1\text{-C}_4$ -alkylaryl

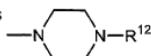
20 R⁹ is chosen from hydrogen, alkyl, substituted alkyl, (C₁-C₄)-alkoxy, C₁-C₄-alkylcycloalkyl, C₁-C₄-alkylaryl, heterocycl, C₁-C₄-alkylheteroaryl, C₁-C₄-alkylheterocycl; and
 m and n are zero.

6. A 4-pyrimidinamine according to claim 5 wherein W is NHR⁹ and
 R⁹ is chosen from hydrogen; methyl; ethyl; 2,2,2-trifluoroethyl; allyl;
 5 cyclopropyl; 2-cyanoethyl; propargyl; methoxy; methoxyethyl;
 cyclopropyl; cyclopropylmethyl; (methylthio)ethyl; 3-methoxypropyl; 3-pyridyl; 2-(3-pyridyl)ethyl; 2-(2-pyridyl)ethyl; 3-pyridylmethyl; 4-pyridylmethyl; 4-pyridylmethyl-N-oxide; 2-pyridazinylmethyl; sulfolan-3-yl; 3-tetrahydrofuranyl; 2-tetrahydrofuranylmethyl; 3-(1-imidazolyl)propyl; 1-t-butoxycarbonyl-4-piperidinyl; 1-t-butoxycarbonyl-4-piperidinylmethyl; 2-(hydroxyimino)propyl; 2-(methoxyimino)propyl; 2-oxo-1-propyl; and
 10 (CH₂)_p 

wherein

R¹⁴ is chosen from H, Cl, F, CN, NO₂, SO₂NH₂, CF₃, COOCH₃, OCH₃, OH, SO₂CH₃, N(CH₃)₂ and COOH;
 15 R¹⁵ is chosen from H, OCH₃ and Cl; and
 p is 1 or 2.

7. A 4-pyrimidinamine according to claim 5 wherein W is



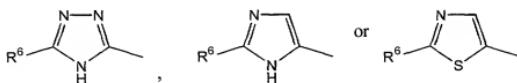
and

R^{12} is *t*-butoxycarbonyl, methoxyacetyl or phenyl.

8. A 4-pyrimidinamine according to claim 2 wherein

Z is CH ;

A is



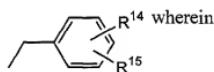
5 R^1 is chosen from *n*-butyl; cyclohexylmethyl; cyclopentylmethyl; 2-methylpropyl; 3-methyl-1-butyl; cyclohexyl; 2,2-dimethylpropyl; benzyl; 2-thienylmethyl; 1-*t*-butoxycarbonyl-4-piperidiny; 4-chlorobenzyl; 2-pyranylmethyl; 4-pyranylmethyl; 4-pyranyl and 1,1-dimethylethyl;

10 R^2 and R^3 are H ;

Q is imidazolyl or pyrrolyl;

W is NHR^9 ; and

R^9 is alkyl, cycloalkyl or



15 R^{14} is chosen from H , Cl , F , CN , NO_2 , SO_2NH_2 , CF_3 , $COOCH_3$, OCH_3 , SO_2CH_3 , $N(CH_3)_2$ and $COOH$; and

R^{15} is chosen from H , OCH_3 and Cl .

9. A pyrimidine according to claim 2 wherein:

A is $R^4R^5N-C(O)-$

R^1 is chosen from isopropyl; *n*-butyl; cyclohexylmethyl; cyclopentylmethyl; naphthylmethyl; cyclohexylethyl; 2-methylpropyl; 3-methyl-1-butyl; cyclohexyl; 2,2-dimethylpropyl;

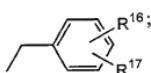
5

benzyl; 2-thienylmethyl; 1-*t*-butoxycarbonyl-4-piperidinyl; 4-methoxybenzyl; 4-chlorobenzyl; 3,4-dichlorobenzyl; 2-pyranylmethyl; 4-pyranylmethyl; 4-pyranyl and 1,1-dimethylethyl; and

10 R², R³ and R⁵ are H.

10. A pyrimidine according to claim 9 wherein:

R⁴ is pyridinyl, pyridinylmethyl, tetrahydronaphthalenyl, indanyl methyl, furanyl methyl, substituted phenyl, or

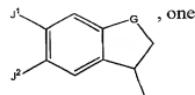


R¹⁶ is chosen from H, Cl, F, CN, NO₂, SO₂NH₂, CF₃, CH₃, COOCH₃,

15 OCH₃, SO₂CH₃, SOCH₃, N(CH₃)₂, tetrazol-5-yl, CONH₂, C(=NOH)NH₂ and COOH; and

R¹⁷ is chosen from H, OCH₃, F and Cl.

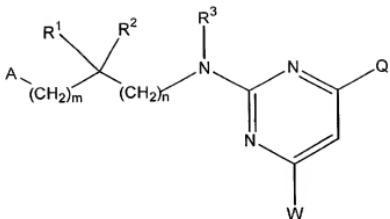
11. A pyrimidine according to claim 9 wherein R⁴ is



of J¹ and J² is H and the other is H, Cl or CN and G is chosen from -CH₂-,

20 -CH₂CH₂-, -OCH₂-, -O- and -CH₂N(lower alkyl)-.

12. A 2-pyrimidinamine according to claim 2, wherein Y is CH, having the formula



13. A 2-pyrimidinamine according to claim 11 wherein Q is chosen from imidazolyl, pyrrolyl, pyridinyl, fluorophenyl and 2-thienyl.

14. A 2-pyrimidinamine according to claim 13 wherein

A is $R^4R^5N-C(O)-$;

5 W is H, Cl, NHR^9 or OR^8 ;

R^1 is chosen from alkyl and C_1-C_3 -alkylcycloalkyl;

R^2 , R^3 and R^4 are H;

R^4 is C_1-C_4 -alkylaryl or C_1-C_4 -alkylheteroaryl;

R^8 is C_1-C_4 -alkylaryl;

10 R^9 is chosen from hydrogen, alkyl, fluoroalkyl, $(C_1-C_4$ -alkoxy)alkyl, $(C_1-C_4$ -alkylthio)alkyl, C_1-C_4 -alkylcycloalkyl, C_1-C_4 -alkylaryl, heterocyclyl, C_1-C_4 -alkylheteroaryl, C_1-C_4 -alkylheterocyclyl; and

m and n are zero.

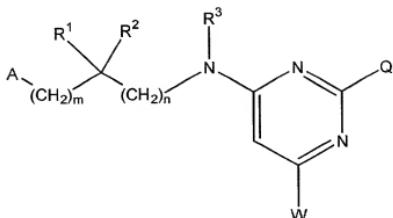
15. A 2-pyrimidinamine according to claim 14 wherein W is NHR^9 and

R^9 is R^{14} wherein

R^{14} is chosen from H, F, Cl, CN, NO_2 , SO_2NH_2 , CF_3 , $COOCH_3$, OCH_3 , SO_2CH_3 , $N(CH_3)_2$ and COOH; and

5 R^{15} is chosen from H, OCH_3 and Cl.

16. A 4-pyrimidinamine according to claim 2, wherein X is CH, having the formula



17. A 4-pyrimidinamine according to claim 16 wherein Q is chosen from imidazolyl and pyrrolyl and m and n are zero.

18. A 4-pyrimidinamine according to claim 17 wherein:

A is $R^4R^5N-C(O)-$;

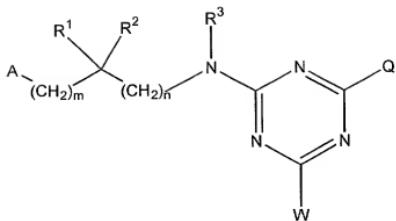
W is NHR^9 ;

5 R^1 is chosen from cyclohexylmethyl; 2-methylpropyl and 3-methyl-1-butylyl;

R^2 , R^3 and R^4 are H; and

R^4 and R^9 are benzyl or substituted benzyl.

19. A triazine according to claim 1, wherein all of X, Y, and Z are N, having the formula



20. A triazine according to claim 19 wherein Q is chosen from imidazolyl and pyrrolyl.

21. A triazine according to claim 20 wherein:

A is $R^4R^5N-C(O)-$;

W is NHR^9 ;

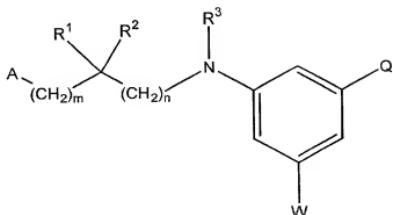
R¹ is chosen from cyclohexylmethyl; 2-methylpropyl and 3-methyl-1-butyl;

5

R², R³ and R⁴ are H; and

R⁴ and R⁹ are benzyl or substituted benzyl.

22. An aniline according to claim 1, wherein all of X, Y and Z are CH, having the formula



wherein Q is chosen from imidazolyl and pyrrolyl.

23. An aniline according to claim 22 wherein:

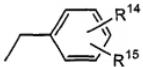
A is $R^4R^5N-C(O)-$;

W is NHR^9 ;

R¹ is chosen from alkyl, cycloalkyl, C₁-C₃-alkylaryl and C₁-C₃-alkylcycloalkyl;

5 R², R³ and R⁵ are H;

R⁴ is C₁-C₄-alkylaryl;

R⁹ is ;

R¹⁴ is chosen from H, Cl, CN, NO₂, SO₂NH₂, CF₃, COOCH₃, OCH₃,

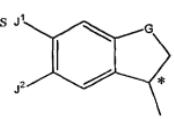
10 SO₂CH₃, N(CH₃)₂ and COOH;

R¹⁵ is chosen from H, OCH₃ and Cl; and

m and n are zero.

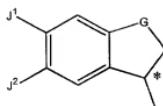
24. A compound according to claim 1 wherein m and n are zero and R² is H having the R configuration at the carbon to which R² is attached.

25. A compound according to claim 1 wherein m and n are zero and R¹ = R².

26. A compound according to claim 1 wherein R⁴ is 

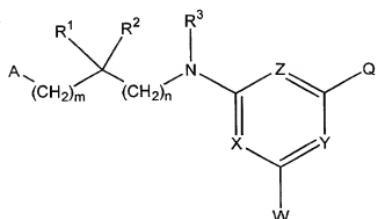
having the R configuration at the carbon indicated with an asterisk.

27. A pyrimidine according to claim 12 wherein R⁴ is ^{J¹}—



having the R configuration at the carbon indicated with an asterisk.

28. A compound of formula

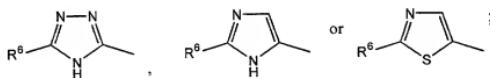


wherein:

(a) all of X, Y and Z are CH; or (b) one of X, Y and Z is N and the rest of X, Y and Z are CH; or (c) two of X, Y and Z are N and the other of X, Y and Z is CH; or (d) all of X, Y and Z are N;

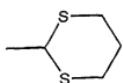
A is A¹ or A²;

A¹ is R⁴R⁵N-C(O)-



A² is chosen from R⁷C(O)NH-, R⁷S(O)₂NH-, R⁴NH-, and R⁴O-;

Q is chosen from aryl, -CH₂R¹³, -CH=N-OCH₃ and



heteroaryl other than 1-imidazolyl and 1-triazolyl;

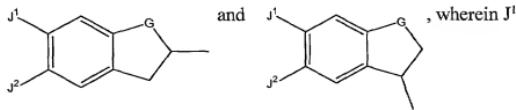
W is chosen from H, Cl, F, R⁸, C₁-C₄-alkylaryl, -OR⁸, -SR⁸, -NR⁹R¹⁰ and -NHC(O)R¹¹, with the proviso that when two of X, Y and Z are N and Q is imidazolyl, W may not be H, Cl, F or R⁸;

R¹ is chosen from alkyl, cycloalkyl, alkenyl, C₁-C₃-alkylcycloalkyl, heterocyclyl, C₁-C₃-alkylheterocyclyl, aryl, C₁-C₃-alkylaryl, heteroaryl, C₁-C₃-alkylheteroaryl, (C₁-C₃-alkyloxy)alkyl, (C₁-C₃-alkyloxy)cycloalkyl, (C₁-C₃-alkylthio)alkyl, (C₁-C₃-alkylthio)cycloalkyl and (C₁-C₃-alkylsulfonyl)alkyl;

R² is H or C₁-C₃-alkyl, or R¹ and R² taken together form a 5- to 7-membered ring structure optionally containing O, S or NR¹²;

R³ is H or C₁-C₆-alkyl, or, when n is zero, R² and R³ taken together may form a 6-membered ring, which may be fused to a six-membered saturated or aromatic carbocycle;

R⁴ is chosen from H, aryl, heteroaryl, C₁-C₄-alkyl substituted with from one to three aryl or heteroaryl residues,



and J² are independently chosen from H, F, Cl, CN, NO₂ and CH₃, and G is chosen from -CH₂-, -CH₂CH₂-, -CH₂CH₂CH₂-, -OCH₂-, -CH₃O-, -CH₂CH₂O-, -OCH₂CH₂-, -O-, -N(lower alkyl)-, -N(lower alkyl)CH₂-, -CH₂N(lower alkyl)-, -S-, -SO-, -SO₂-, -CH₂S-, -SCH₂-, -CH₂SO-, -SOCH₂-, -CH₂SO₂-, and -SO₂CH₂;

R⁵ is H or C₁-C₃-alkyl, with the proviso that both R³ and R⁵ cannot be alkyl;

R⁶ is aryl;

R⁷ is aryl or C₁-C₃-alkylaryl;

R⁸ is chosen from alkyl, aryl, heteroaryl, substituted alkyl, C₁-C₄-alkylaryl, C₁-C₄-alkylheterocycl and C₁-C₄-alkylheteroaryl;

R⁹ is chosen from H, alkyl, alkenyl, substituted alkyl, cycloalkyl, aryl, alkoxy, heteroaryl, fluoroalkyl, C₁-C₄-alkylcycloalkyl, (C₁-C₄-alkoxy)alkyl, (C₁-C₄-alkoxycarbonyl)alkyl, (C₁-C₄-alkylthio)alkyl, heterocycl, C₁-C₄-alkylheterocycl, C₁-C₄-alkylaryl, and C₁-C₄-alkylheteroaryl;

R¹⁰ is H or C₁-C₃-alkyl, or

R⁹ and R¹⁰ taken together may form a 5- to 7-membered ring structure optionally containing O, S, SO, SO₂ or NR¹², said ring optionally substituted with -OH, -CN, -COOH or -COOCH₃;

R¹¹ is aryl;

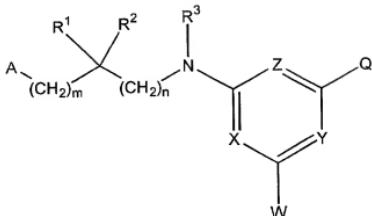
R¹² is chosen from H, C₁-C₃-alkyl, alkoxy carbonyl, methoxyacetyl and aryl;

R¹³ is chosen from -OH, -OTHP, 1-imidazolyl, and 1-pyrrolyl;

m is zero or one; and

n is zero or one, with the proviso that when A is A², m and n cannot both be zero.

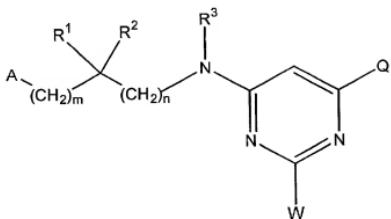
29. A pyrimidine according to claim 28 of formula



wherein:

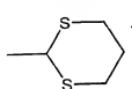
two of X, Y and Z are N and the third is CH.

30. A 4-pyrimidinamine according to claim 29, wherein Z is CH, having the formula



31. A 4-pyrimidinamine according to claim 30 wherein Q is chosen from methylimidazolyl, pyrrolyl, methylpyrrolyl, pyrazolyl, methylpyrazolyl, furanyl, methylfuranyl, thienyl, oxazolyl, thiazolyl, pyridinyl, quinolinyl, 1-methylpyrimidin-2-onyl, phenyl, fluorophenyl, hydroxymethyl, 2-imidazolyl, tetrahydropyranoyloxymethyl, imidazolylmethyl, pyrrolylmethyl, -CH=N-OCH₃,

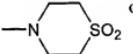
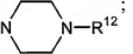
5 and



32. A 4-pyrimidinamine according to claim 31 wherein:

Q is chosen from pyrrol-1-yl, imidazol-1-yl, furan-3-yl, 2-methylimidazol-1-yl and 4-methylimidazol-1-yl;

10 A is $R^4R^5N-C(O)-$;

W is Cl, NHR^9 , $N(CH_3)R^9$, OR^8 , SR^8 , R^8 , morpholin-4-yl,
 or ;

R^1 is chosen from alkyl, cycloalkyl, C_1-C_3 -alkylaryl, C_1-C_3 -alkylcycloalkyl, C_1-C_3 -alkylheterocycl, C_1-C_3 -alkylheteroaryl ;

15 R^2 , R^3 and R^5 are H;

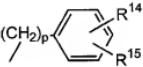
R^8 is C_1-C_4 -alkylaryl

R^9 is chosen from hydrogen, alkyl, substituted alkyl, (C_1-C_4) -alkoxy, C_1-C_4 -alkylcycloalkyl, C_1-C_4 -alkylaryl, heterocycl, C_1-C_4 -alkylheteroaryl, C_1-C_4 -alkylheterocycl; and

20 m and n are zero.

33. A 4-pyrimidinamine according to claim 32 wherein W is NHR^9 and

R^9 is chosen from hydrogen; methyl; ethyl; 2,2,2-trifluoroethyl; allyl; cyclopropyl; 2-cyanoethyl; propargyl; methoxy; methoxyethyl; cyclopropyl; cyclopropylmethyl; (methylthio)ethyl; 3-methoxypropyl; 3-pyridyl; 2-(3-pyridyl)ethyl; 2-(2-pyridyl)ethyl; 3-pyridylmethyl; 4-pyridylmethyl; 4-pyridylmethyl-N-oxide; 2-pyridazinylmethyl; sulfolan-3-yl; 3-tetrahydrofuranyl; 2-tetrahydrofuranylmethyl; 3-(1-imidazolyl)propyl; 1-t-butoxycarbonyl-4-piperidinyl; 1-t-butoxycarbonyl-4-piperidinylmethyl; 2-(hydroxyimino)propyl; 2-(methoxyimino)propyl; 2-oxo-1-propyl; and

5 $(CH_2)_p$ 

10

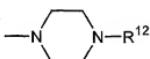
wherein

14 R¹⁴ is chosen from H, Cl, F, CN, NO₂, SO₂NH₂, CF₃, COOCH₃, OCH₃, OH, SO₂CH₃, N(CH₃)₂ and COOH;

15 R¹⁵ is chosen from H, OCH₃ and Cl; and

p is 1 or 2.

34. A 4-pyrimidinamine according to claim 32 wherein W is



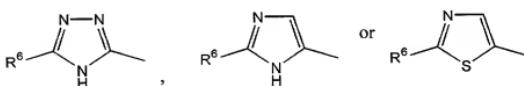
and

R¹² is t-butoxycarbonyl, methoxyacetyl or phenyl.

35. A 4-pyrimidinamine according to claim 29 wherein

Z is CH;

A is



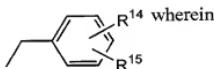
5 R¹ is chosen from n-butyl; cyclohexylmethyl; cyclopentylmethyl; 2-methylpropyl; 3-methyl-1-butyl; cyclohexyl; 2,2-dimethylpropyl; benzyl; 2-thienylmethyl; 1-t-butoxycarbonyl-4-piperidinyl; 4-chlorobenzyl; 2-pyranylmethyl; 4-pyranylmethyl; 4-pyranyl and 1,1-dimethylethyl;

10 R² and R³ are H;

Q is pyrrolyl;

W is NHR⁹; and

R⁹ is alkyl, cycloalkyl or

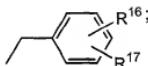


15 R¹⁴ is chosen from H, Cl, F, CN, NO₂, SO₂NH₂, CF₃, COOCH₃, OCH₃,
 R¹⁵ is chosen from H, OCH₃ and Cl.

36. A pyrimidine according to claim 29 wherein:
 A is R⁴R⁵N-C(O)-
 R¹ is chosen from isopropyl; n-butyl; cyclohexylmethyl;
 5 cyclopentylmethyl; naphthylmethyl; cyclohexylethyl; 2-methylpropyl; 3-methyl-1-butyl; cyclohexyl; 2,2-dimethylpropyl; benzyl; 2-thienylmethyl; 1-*t*-butoxycarbonyl-4-piperidinyl; 4-methoxybenzyl; 4-chlorobenzyl; 3,4-dichlorobenzyl; 2-pyranylmethyl; 4-pyranylmethyl; 4-pyranyl and 1,1-dimethylethyl;

R², R³ and R⁵ are H;

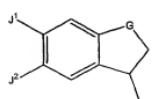
10 R⁴ is pyridinyl, pyridinylmethyl, indanyl methyl, furanyl methyl, tetrahydronaphthalenyl, substituted phenyl, or



R¹⁶ is chosen from H, Cl, F, CN, NO₂, SO₂NH₂, CF₃, CH₃, COOCH₃, OCH₃, SO₂CH₃, N(CH₃)₂ and COOH; and

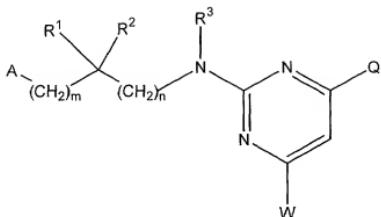
R¹⁷ is chosen from H, OCH₃, F and Cl.

37. A pyrimidine according to claim 29 wherein R⁴ is



38. A pyrimidine according to claim 37 wherein one of J¹ and J² is H and the other is H, Cl or CN and G is chosen from -CH₂-, -CH₂CH₂-, -OCH₂-, -O- and -CH₂N(lower alkyl)-.

39. A 2-pyrimidinamine according to claim 29, wherein Y is CH, having the formula



40. A 2-pyrimidinamine according to claim 39 wherein Q is chosen from pyrrolyl, pyridinyl, fluorophenyl and 2-thienyl.

41. A 2-pyrimidinamine according to claim 40 wherein

A is $R^4R^5N-C(O)-$;

5 W is H, Cl, NHR^9 or OR^8 ;

R^1 is chosen from alkyl and C_1-C_3 -alkylcycloalkyl;

R^2 , R^3 and R^5 are H;

R^4 is C_1-C_4 -alkylaryl or C_1-C_4 -alkylheteroaryl;

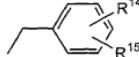
R^8 is C_1-C_4 -alkylaryl;

10 R^9 is chosen from hydrogen, alkyl, fluoroalkyl, $(C_1-C_4$ -alkoxy)alkyl, $(C_1-C_4$ -alkylthio)alkyl, C_1-C_4 -alkylcycloalkyl, C_1-C_4 -alkylaryl, heterocyclyl, C_1-C_4 -alkylheteroaryl, C_1-C_4 -alkylheterocyclyl; and

m and n are zero.

42. A 2-pyrimidinamine according to claim 41 wherein W is NHR^9 and

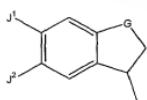
R^9 is



R^{14} is chosen from H, F, Cl, CN, NO_2 , SO_2NH_2 , CF_3 , $COOCH_3$, OCH_3 , SO_2CH_3 , $N(CH_3)_2$ and $COOH$; and

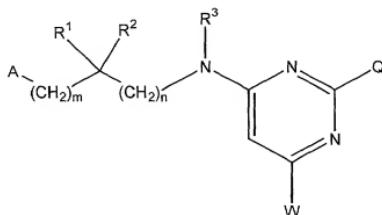
5 R^{15} is chosen from H, OCH_3 and Cl.

43. A 2-pyrimidineamine according to claim 39 wherein R^4 is



chosen from $-CH_2-$, $-CH_2CH_2-$, $-OCH_2-$, $-O-$ and $-CH_2N(lower\ alkyl)-$.

44. A 4-pyrimidinamine according to claim 29, wherein X is CH, having the formula



45. A 4-pyrimidinamine according to claim 44 wherein Q is pyrrolyl and m and n are zero.

46. A 4-pyrimidinamine according to claim 45 wherein:

A is $R^4R^3N-C(O)-$;

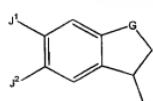
W is NHR^3 ;

5 R^1 is chosen from cyclohexylmethyl; 2-methylpropyl and 3-methyl-1-butyl;

R², R³ and R⁵ are H; and

R⁴ and R⁹ are benzyl or substituted benzyl.

47. A 4-pyrimidineamine according to claim 44 wherein R⁴ is



10 chosen from -CH₂-, -CH₂CH₂-, -OCH₂-, -O- and -CH₂N(lower alkyl)-.

48. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a compound according to claim 1.

49. A pharmaceutical composition according to claim 48 additionally comprising a steroidal or nonsteroidal antiinflammatory drug (NSAID).

50. A pharmaceutical composition according to claim 48 additionally comprising a nonsteroidal antiinflammatory drug (NSAID).

51. A pharmaceutical composition according to claim 50 wherein said NSAID is chosen from arylpropionic acids, arylacetic acids, arylbutyric acids, fenamic acids, arylcarboxylic acids, pyrazoles, pyrazolones, salicylic acids; and oxicams.

52. A pharmaceutical composition according to claim 48 additionally comprising a cyclooxygenase inhibitor.

53. A pharmaceutical composition according to claim 52 wherein said cyclooxygenase inhibitor is ibuprofen or a salicylic acid derivative.

54. A pharmaceutical composition according to claim 48 additionally comprising a selective cyclooxygenase-2 inhibitor.

55. A pharmaceutical composition according to claim 54 wherein said selective cyclooxygenase-2 inhibitor is rofecoxib or celecoxib.

56. A pharmaceutical composition according to claim 48 additionally comprising a selective cyclooxygenase-1 inhibitor.

57. A pharmaceutical composition according to claim 48 additionally comprising a steroidal antiinflammatory drug.

58. A pharmaceutical composition according to claim 57 wherein said steroidal antiinflammatory drug is chosen from finasteride, beclomethasone and hydrocortisone.

59. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a compound according to claim 28.

60. A pharmaceutical composition according to claim 59 additionally comprising a steroid or nonsteroidal antiinflammatory drug (NSAID).

61. A pharmaceutical composition according to claim 59 additionally comprising a nonsteroidal antiinflammatory drug (NSAID).

62. A pharmaceutical composition according to claim 61 wherein said NSAID is chosen from arylpropionic acids, arylacetic acids, arylbutyric acids, fenamic acids, arylcarboxylic acids, pyrazoles, pyrazolones, salicylic acids; and oxicams.

63. A pharmaceutical composition according to claim 59 additionally comprising a cyclooxygenase inhibitor.

64. A pharmaceutical composition according to claim 63 wherein said cyclooxygenase inhibitor is ibuprofen or a salicylic acid derivative.

65. A pharmaceutical composition according to claim 59 additionally comprising a selective cyclooxygenase-2 inhibitor.

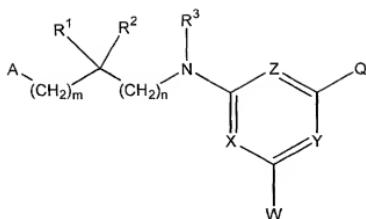
66. A pharmaceutical composition according to claim 65 wherein said selective cyclooxygenase-2 inhibitor is rofecoxib or celecoxib.

67. A pharmaceutical composition according to claim 59 additionally comprising a selective cyclooxygenase-1 inhibitor.

68. A pharmaceutical composition according to claim 59 additionally comprising a steroidal antiinflammatory drug.

69. A pharmaceutical composition according to claim 68 wherein said steroidal antiinflammatory drug is chosen from finasteride, beclomethasone and hydrocortisone.

70. A method of treating a condition resulting from inappropriate bradykinin receptor activity comprising administering to a subject in need of such treatment a therapeutically effective amount of a compound of formula I



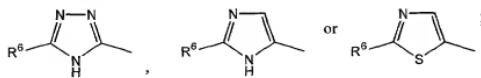
I

wherein:

(a) all of X, Y and Z are CH; or (b) one of X, Y and Z is N and the rest of X, Y and Z are CH; or (c) two of X, Y and Z are N and the other of X, Y and Z is CH; or (d) all of X, Y and Z are N;

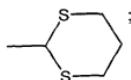
A is A¹ or A²;

A¹ is R⁴R⁵N-C(O)-



A² is chosen from R⁷C(O)NH-, R⁷S(O)₂NH-, R⁴NH-, and R⁴O-;

Q is chosen from heteroaryl, aryl, -CH₂R¹³, -CH=N-OCH₃ and



W is chosen from H, Cl, F, R⁸, C₁-C₄-alkylaryl, -OR⁸, -SR⁸, -NR⁹R¹⁰

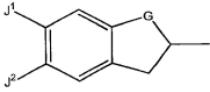
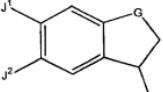
and -NHC(O)R¹¹, with the proviso that when two of X, Y and Z are N and Q is imidazolyl, W may not be H, Cl, F or R⁸;

R¹ is chosen from alkyl, cycloalkyl, alkenyl, C₁-C₃-alkylcycloalkyl, heterocyclyl, C₁-C₃-alkylheterocyclyl, aryl, C₁-C₃-alkylaryl, heteroaryl, C₁-C₃-alkylheteroaryl, (C₁-C₃-alkyloxy)alkyl, (C₁-C₃-alkyloxy)cycloalkyl, (C₁-C₃-alkylthio)alkyl, (C₁-C₃-alkylthio)cycloalkyl and (C₁-C₃-alkylsulfonyl)alkyl;

R² is H or C₁-C₃-alkyl, or R¹ and R² taken together form a 5- to 7-membered ring structure optionally containing O, S or NR¹²;

R³ is H or C₁-C₆-alkyl, or, when n is zero, R² and R³ taken together may form a 6-membered ring, which may be fused to a six-membered saturated or aromatic carbocycle;

R⁴ is chosen from H, aryl, heteroaryl, C₁-C₄-alkyl substituted with from one to three aryl or heteroaryl residues,


and

, wherein J¹

and J² are independently chosen from H, F, Cl, CN, NO₂ and CH₃, and G is chosen from -CH₂-, -CH₂CH₂-, -CH₂CH₂CH₂-, -OCH₂-, -CH₂O-, -CH₂CH₂O-, -OCH₂CH₂-, -O-, -N(lower alkyl)-, -N(lower alkyl)CH₂-, -CH₂N(lower alkyl)-, -S-, -SO-, -SO₂-, -CH₂S-, -SCH₂-, -CH₂SO-, -SOCH₂-, -CH₂SO₂-, and -SO₂CH₂;

R⁵ is H or C₁-C₃-alkyl, with the proviso that both R³ and R⁵ cannot be alkyl;

R⁶ is aryl;

R⁷ is aryl or C₁-C₃-alkylaryl;

R⁸ is chosen from alkyl, aryl, heteroaryl, substituted alkyl, C₁-C₄-alkylaryl, C₁-C₄-alkylheterocyclyl and C₁-C₄-alkylheteroaryl;

R^9 is chosen from H, alkyl, alkenyl, substituted alkyl, cycloalkyl, aryl, alkoxy, heteroaryl, fluoroalkyl, C_1 - C_4 -alkylcycloalkyl, (C_1 - C_4 -alkoxy)alkyl, (C_1 - C_4 -alkoxycarbonyl)alkyl, (C_1 - C_4 -alkylthio)alkyl, heterocyclyl, C_1 - C_4 -alkylheterocyclyl, C_1 - C_4 -alkylaryl, and C_1 - C_4 -alkylheteroaryl;

R^{10} is H or C_1 - C_3 -alkyl, or

R^9 and R^{10} taken together may form a 5- to 7-membered ring structure optionally containing O, S, SO, SO₂ or NR¹², said ring optionally substituted with -OH, -CN, -COOH or -COOCH₃;

R^{11} is aryl;

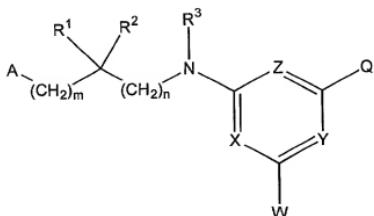
R^{12} is chosen from H, C_1 - C_3 -alkyl, alkoxy carbonyl, methoxyacetyl and aryl;

R^{13} is chosen from -OH, -OTHP, 1-imidazolyl, and 1-pyrrolyl;

m is zero or one; and

n is zero or one, with the proviso that when A is Λ^2 , m and n cannot both be zero.

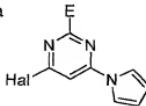
71. A method according to claim 70 wherein said compound is a pyrimidine of the formula



wherein:

two of X, Y and Z are N and the third is CH.

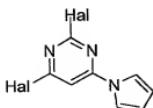
72. The method according to claim 70 wherein said condition resulting from inappropriate bradykinin receptor activity is diabetic vasculopathy, post-capillary resistance or diabetic symptoms associated with insulitis.
73. The method according to claim 72 wherein said diabetic symptoms associated with insulitis comprise hyperglycemia, diuresis, proteinuria and increased nitrite and kallikrein urinary excretion.
74. The method according to claim 70 wherein said condition resulting from inappropriate bradykinin receptor activity is inflammation, edema, liver disease, asthma, rhinitis, or septic shock.
75. The method according to claim 70 wherein said condition resulting from inappropriate bradykinin receptor activity is pain or hyperalgesia.
76. The method according to claim 75 wherein said pain is chronic pain, pain associated with inflammation or dental pain.
77. The method of treating pain or hyperalgesia according to claim 75 additionally comprising administering a steroidal or nonsteroidal antiinflammatory drug (NSAID).
78. The method of treating pain or hyperalgesia according to claim 77 wherein an NSAID is administered.
79. The method of treating pain or hyperalgesia according to claim 75 additionally comprising administering a cyclooxygenase inhibitor.

80. The method of treating pain or hyperalgesia according to claim 79 wherein said cyclooxygenase inhibitor is a selective cyclooxygenase-2 inhibitor.
81. The method of treating pain or hyperalgesia according to claim 79 wherein said cyclooxygenase inhibitor is a selective cyclooxygenase-1 inhibitor.
82. The method according to claim 70 wherein said condition resulting from inappropriate bradykinin receptor activity is multiple sclerosis.
83. The method according to claim 70 wherein said condition resulting from inappropriate bradykinin receptor activity is atherosclerosis.
84. The method according to claim 70 wherein said condition resulting from inappropriate bradykinin receptor activity is Alzheimer's disease or closed head trauma.
85. A method for stimulating hair growth or preventing hair loss comprising administering to a subject in need of such treatment a therapeutically effective amount of a compound formula I according to claim 70.
86. A compound of formula 
87. A compound according to claim 86 wherein Hal is chlorine.

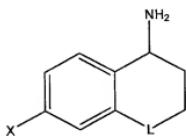
88. A compound according to claim 86 wherein Hal is fluorine.

89. A compound according to claim 86 wherein E is methylthio and Hal is chlorine.

90. A compound according to claim 86 of formula

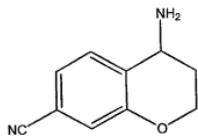


91. A compound of formula

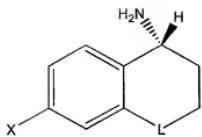


wherein X is -CN or halogen and L is -CH₂- or -N(CH₃)-.

92. A compound of formula

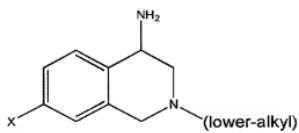


93. A compound of formula



having the R absolute stereochemistry at the asymmetric carbon, wherein X is -CN or halogen and L is -CH₂-, -O- or -N(CH₃)-.

94. A compound of formula



wherein X is -CN or halogen.